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TO: MAIL STOP APPEAL BRIEF – PATENTS
Examiner David R. Lazaro

FAX NO: 1-571-273-8300

FROM: Gero G. McClellan/Jon Stewart / pdm

PAGE(S) with cover: 9

RE:

TITLE: METHOD FOR EFFICIENTLY CONTROLLING SOCKET SERVER SEND BUFFER USAGE
U.S. SERIAL NO.: 10/037,595
FILING DATE: January 4, 2002
INVENTOR(S): Michael Edward Baskey et al.
EXAMINER: David R. Lazaro
GROUP ART UNIT: 2155
CONFIDENTIATION NO.: 6369

Attached are the following document(s) for the above-referenced application:

Reply Brief.

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PATENT
Atty. Dkt. No. ROC920010193US3
PS Ref. No.: IBMK10195

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:
Baskey et al.

Serial No.: 10/037,595

Filed: January 4, 2002

For: METHOD FOR EFFICIENTLY CONTROLLING SOCKET SERVER SEND BUFFER USAGE

§ Confirmation No.: 6369
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§ Group Art Unit: 2155
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§ Examiner: David R. Lazaro
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MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, or facsimile transmitted to the U.S. Patent and Trademark Office to fax number 571-273-8300 to the attention of Examiner David R. Lazaro, on the date shown below:

October 2, 2006
Date

Jon K. Stewart

REPLY BRIEF

Dear Sir:

Applicants submit this Reply Brief to the Board of Patent Appeals and Interferences in response to the Examiner's Answer dated August 1, 2006. Please charge any additional fees that may be required to make this Reply Brief timely and acceptable to Deposit Account No. 09-0465/ROC920010195US3.

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PATENT
Atty. Dkt. No. ROC920010193US3
PS Ref. No.: IBMK10195

Grounds of Rejection to be Reviewed on Appeal

1. Claims 1-3, 5-10,12-13,15-21 and 24-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Nair* (U.S. Patent Pub. No. 2003/0217184) in view of *Beighe* (U.S. 6,055,576).

2. Claims 22, 23 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Nair* in view of *Beighe* as applied to claims 20 and 24, and further in view of *Putcha* (U.S. 6,822,966).

ARGUMENTS

THE EXAMINER ERRS IN REJECTING CLAIMS 1-3, 5-10, 12-13, 15-21, and 24-31 UNDER 35 U.S.C. § 103(A) AS BEING OBVIOUS OVER *NAIR* IN VIEW OF *BEIGHE*

The method recited by claim 1 includes a step of, in response to a request from a server application, allocating a system-supplied buffer to the server application. As claimed, the server application is configured to exchange data with a client application running on another computer using a network-based socket and the system supplied buffer is of a sufficient size to contain the data. Once a system-supplied buffer is allocated to the server application, the method includes passing the system-supplied buffer to the network-based socket to allow the server application to continue processing while the data is sent to the client. Independent claims 12 and 24 recite similar limitations.

The Examiner maintains the position that *Nair*'s discussion of the operations of certain "protocol software modules" discloses the method claimed by Applicants. More specifically, the Examiner suggests that the term "protocol software module" (as disclosed in *Nair*) may be used interchangeably with that of a "server application" (as claimed by Applicants). Respectfully, Applicants disagree. The "protocol software modules" discussed in *Nair* are limited to TCP (and lower) layers of a TCP/IP stack and further, *Nair* expressly distinguishes the operations of these "protocol software modules" from those of a high level application (e.g., the server application claimed by Applicants). The following passages from *Nair* illustrate this point:

> a hardware interface, typically implemented in a chipset, provides a physical connection to the network. A driver, such as ATM driver 105, transmits and receives information, generally in the form of a well defined stream of binary digits, respectively to and from the hardware interface 103. The driver provides a mechanism to transmit and receive the stream of binary digits as a block of data, whether defined as a fixed length cell, as in the case of an ATM stream of data, or a variable length frame of data, as in the case of an Ethernet-based frame of data transmitted over a local area network. An Ethernet/IEEE 802.3 hardware interface, not shown, provides a physical connection to local area network 101 and

> essentially operates in the same manner to generally perform the same functions as ATM hardware interface 103.
>
> The ATM driver services higher layer protocol software modules in protocol stack implemented in the machine, such as PPP over ATM adaptation layer 5 (PPP over AAL5) software module 107 and Point to Point Protocol (PPP) software module 109. These modules, in turn, service, for example, a higher layer protocol software module such as IP software module 110. Likewise, the Ethernet driver services the IP software module 110. Finally, IP software module 110 services TCP software module 112.

Nair, ¶ 18-19. These passages describe elements of *Nair*, Figure 1, which illustrates a physical layer (H/W I/F 103), a data link layer (Ethernet 108 or ATM driver 105 and PPP over AALS 109), a network layer (IP 110), and a transport layer (TCP 11) of a network protocol stack. Figure 1 does not even illustrate the "higher level application;" instead, this figure simply includes an arrow leading from the TCP module 112. It is not until after receiving a data frame, either from the network connection or form a "higher level application," that *Nair* discloses doing anything at all. Once such a frame is received, *Nair* discloses passing a pointer among the transport, network, data link, and physical layers of the protocol stack, instead of passing the actual data frame. Thus, Applicants submit that a reasonable reading of *Nair is* limited to operations preformed among the "software protocol modules" of a transport, network, data link, and physical layer of a data protocol communications stack, and further, that Nair fails to teach, show, or even suggest techniques performed by the "higher level application" to process messages.

The very passage cited by the Examiner confirms this point: "*Nair* also explicitly refers to the application layer, for example, on page 3, [0030], stating 'receiving at the top of the protocol stack a data frame from a higher laver application program.'" *Examiner's Answer*, p. 14. The issue is not whether Nair "refers to the application layer;" but rather whether *Nair* discloses operations performed by a "server application" that include the steps recited by the present claims. Set out in full, the paragraph cited by the Examiner provides.

> It is appreciated that the process of the present invention is equally applicable to receiving at the top of the protocol stack a data frame from a higher layer application program, and passing control of processing the

> frame of data down the protocol stack in the machine in preparation for transmitting the data frame from the machine and over the attached network to another machine connected to the network. The process as described above operates in the same manner.

Nair, ¶ 30. Plainly, this passage describes "a data frame" being passed to the "top of the protocol stack" from a "higher layer application program." Other than handing off the "data frame," the operations of the "higher layer application program," are irrelevant. As disclosed in *Nair*, the operations of the application software are a black box to the "software protocol modules." Once a data frame is prepared, the "higher layer application program" passes the data frame to the "top" of the protocol stack.

The distinction between the operations of the "software protocol modules" and those of the "higher level application" is even more apparent from *Nair's* discussion of processing of inbound data frames. Specifically, *Nair* teaches that a buffer used by the "software protocol modules" of the TCP/IP protocol stack may be discarded (or returned to the buffer pool) once a frame is provided to a server application. On this point, *Nair* provides:

> "[P]rocessing of the data frame continues up the protocol stack until processing of the data frame by the machine is competed. **At such time, the data is read from the buffer at 230 and, for example, provided to an application software program.** At this point, for example, **the buffer is no longer needed** for temporarily storing the data pockets while the various protocol software modules in the protocol stack process the data frame."

Nair, ¶ 28. Clearly, the operations performed by the server application are distinct from those used to manage a buffer within different layers of the protocol stack. The present claims, however, are directed to processing that occurs *after* data has been processed through a protocol communications stack, i.e., after the data is, in the words of *Nair*, "provided to an application software program." Thus, Applicants submit that *Nair* fails to disclose a method performed by a server application in processing messages that includes allocating a system-supplied buffer to the server application in response to a request from a server application.

For all the foregoing reasons, Applicants submit that each of claims 1-3, 5-10, 12-13, 15-21 and 24-31 are patentable over *Nair* in view of *Beighe*.

Obviousness of Claims 22, 23, 32-34 over *Nair* in view of *Beighe* and *Putcha*

Regarding claims 22, 23, 32-34, each of these claims depends from one of claims 20 or 24. As Applicants believe the above remarks demonstrate that *Nair* in view of *Beighe* fails to render claims 20 and 24 obvious, Applicants believe that these dependent claims are allowable without the need for further remarks.

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CONCLUSION

The Examiner errs in finding that:

- Claims 1-3, 5-10,12-13,15-21 and 24-31 are unpatentable over *Nair* in view of *Beighe* under 35 U.S.C. § 103(a).
- Claims 22, 23 and 32-34 are unpatentable over *Nair* in view of *Beighe* and further in view of *Putcha*.

Withdrawal of the rejection and allowance of all claims is respectfully requested.

Respectfully submitted,

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